

REMARKS

Claims 1-11 and 24-37 are unchanged and remain pending in the present application. Applicant would like to thank the Examiner for the courtesies extended to applicant's representative during a telephone interview on September 24, 2008. During that interview, the Examiner indicated that the arguments as set forth below are correct. Since the Office Action failed to address the limitation discussed below, the Examiner foresees issuing another non-final Office Action. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 6, 8-11, 24, 29, 31, 32, and 34-37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Murai (US 6,705,708) ("Murai '708") in view of Qui et al. (US 6,402,304) ("Qui"); Cheng et al.: Thin Solid Films, Vol. 385, Issues 1-2, April 2001, pp. 5-10, Thickness-dependent microstructures and electrical properties of PZT films derived from sol-gel process ("Cheng"); and Sumi et al.: Thin Solid Films, Vol. 315, Issues 1-2, March 1998, pp. 77-85: Effect of the annealing temperature on structural and piezoelectric properties of the sol-gel Pb(Zr 0.56Ti 0.44) 0.90 (Mg 1/3 Nb 2/3) 0.10 O3 films ("Sumi"). Applicant respectfully traverses this rejection.

The outstanding Office Action alleges at page 3, lines 5-8, that Murai '708 teaches "the columnar grains of the second thin piezoelectric film have a larger average cross-sectional diameter than the columnar grains of the first thin piezoelectric film (col. 8, lines 21-23)." However, as Applicant discussed in response to the previous

rejections, Murai '708 merely describes in col. 8, lines 21-23, "the total thickness of the second piezoelectric layer (i.e., the piezoelectric film 43 formed on the part from which the bottom electrode 33a was removed) is greater than the thickness of the first piezoelectric layer (i.e., the piezoelectric film 43 formed on the other part)." Therefore, Murai '708 fails to teach or suggest that "the columnar grains of the second thin piezoelectric film have a larger average cross-sectional diameter than the columnar grains of the first thin piezoelectric film" as recited in the pending claims. Moreover, the Examiner concedes this point in the Office Action at page 20, line 11, to page 21, line 4.

The Examiner relies upon Qui, Cheng and Sumi to teach the ratio of the thickness of piezoelectric film to the average cross-sectional diameter of the columnar grains of the second piezoelectric film. Without conceding this assertion or the merits of combining these references with Murai '708, applicant points out that neither of these references cure the deficiency of Murai as noted above. In other words, neither Qui, Cheng, nor Sumi teach or suggest that "the columnar grains of the second thin piezoelectric film have a larger average cross-sectional diameter than the columnar grains of the first thin piezoelectric film" as recited in the pending claims. Therefore, it is respectfully submitted that each of the independent claims, along with claims depending therefrom, defines patentable subject matter over this combination of references. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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